PATENT CLAIMS

1. A method for the removal of metal impurities in chloride-based copper recovery processes, **characterised in that** the metal impurities are removed from a strong chloride solution of monovalent copper using chelating ion-exchange resins.

2. A method according to claim 1, **characterised in that** there is a styrene-divinyl-benzene matrix of ring structure in the ion-exchange resin.

3. A method according to claims 1 or 2, **characterised in that** the functional group of the ion-exchange resin is the iminodiacetic acid group.

4. A method according to claims 1 or 2, **characterised in that**, the functional group of the ion-exchange resin is the aminophosphonic group.

5. A method according to some of the above claims, **characterised in that** the metal impurity to be removed is one or more of the group of zinc, nickel, lead, iron and manganese.

6. A method according to some of the above claims, **characterised in that** the alkali chloride content of the strong chloride solution is at least 200 g/l.

7. A method according to some of the above claims, **characterised in that** the amount of monovalent copper in the solution to be purified is 30 – 100 g/l.

8. A method according to some of the above claims, **characterised in that** the removal of metal impurities is carried out in an acidic environment.

9. A method according to some of the above claims, **characterised in that** the removal of metal impurities is carried out in a neutral environment.

10. A method according to some of the above claims, **characterised in that** the copper-containing chloride solution that is the mother liquor in the resin is displaced before elution with an NaCl solution and that the alkaline solution to be used for regenerating the resin is displaced with an NaCl solution before the copper-containing chloride solution is fed into the resin.

11. A method according to some of the above claims, **characterised in that** the majority of the metal impurities in the strong chloride solution of monovalent copper are removed by hydroxide precipitation and the rest by using ion exchange.

12. A method according to claim 11, **characterised in that** the metal impurities are removed by hydroxide precipitation to a content of 0.1 – 1 g/l, after which the final purification is made using ion exchange.

13. A method according to some of the above claims, **characterised in that** impurities are removed from a strong chloride solution of copper by ion exchange at least to a level that corresponds to cathode copper LME-A grade impurity level.